

# PHENIX WEEKLY PLANNING



5/28/2009  
Don Lynch

## Yesterday's Maintenance Access Day - Feedback

- RPC3N Measurements
- S1 & N1 square hole scintillator counter re-orientation
- HBD LeCroy module replacement, diagnostic work
- UPS Power tests
- TEC EN1 troubleshooting

**Next Maintenance Access Day - June 10 (Last Maintenance Access Day before end of run?)**

Anyone wishing to access the Tunnel either north or south of the IR should inform the RC at least 2 days ahead of time to coordinate with C-A-D. If you require technician assistance inform me as well.

# RPC3N Measurements compared to Model:



Item	Model	Measured
Pedestal Floor to Ceiling	192 inches	189.875
Top of MuID 5 steel to tunnel ceiling	50.38	52.44
Top of MuID 5 steel to pedestal floor	242.38	242.32 (calc'd)
Top of MuID 5 steel to top of crystal palace	n/a	160
Height of crystal palace	n/a	96
East trench floor to ceiling	270	269.75
West trench floor to ceiling	270	269.75
Beam height	50.03	49 (very rough measurement)

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## Shutdown '09 Major tasks (expect 5 month shutdown):

- EOR party June 26/2009 shutdown Begins June 28
- End run, remove wall, MuID collars down, EC to AH (3 weeks)
- RPC Factory Operations (in progress and continuing beyond Shutdown '09)
- RPC Station 3 North (entire shutdown)
- Install Station 1 South scaffolding (1 week)
- Install Station 2/3 scaffolding (2 weeks)
- Install stations 1, 2 and 3 south MuTrigger FEE's (12 weeks)
- MuTr decapacitations: station 3 south (3 weeks)
- PC1 East repair (4 weeks)
- Mechanical/Electrical Plumbing installation of (4) new DCM racks
- Add Ar Dewar and expand gas pad to add storage (12 weeks)
- Prep for future upgrades/existing equipment maintenance & Repair (as necessary)

# Shutdown Prep Now to June 28

Task	Complete By
RPC Installation design parts & Tools	May 29
MuTrigger FEE Cable Management plan	June 15
RPC3 N Cable and Piping relocation Plan	June 15
RPC Electronics Rack Prep	June 20
RPC Installation parts and Tools Fabrication	June 28
MuTrigger FEE Parts and Tools ordering	June 28
RPC Factory Tools complete and commissioned	June 28

TECHNICAL SUPPORT NOON

# End of Run, Start of Shutdown

TECHNICAL SUPPORT NOON

Task	Completion Date
• End of Run Party	6/26
• End of Run 9	6/28
• Flammable Gas Purge	6/30
• Open Wall and Disassemble	7/2
• MuID Collar Removal	7/8
• Move MMS South	7/10
• Test RMC Higher comm speed on EC before disconnecting	7/15
• Disconnect EC and move to AH	7/17
• Move MuID Collars to AH	7/20
• Install IR floor plates, rolling cart & manlift in IR	7/22
• Reconnect EC for shutdown mode	7/24
• Remove East/West vertical & Upper Bias MMS lampshades	7/24

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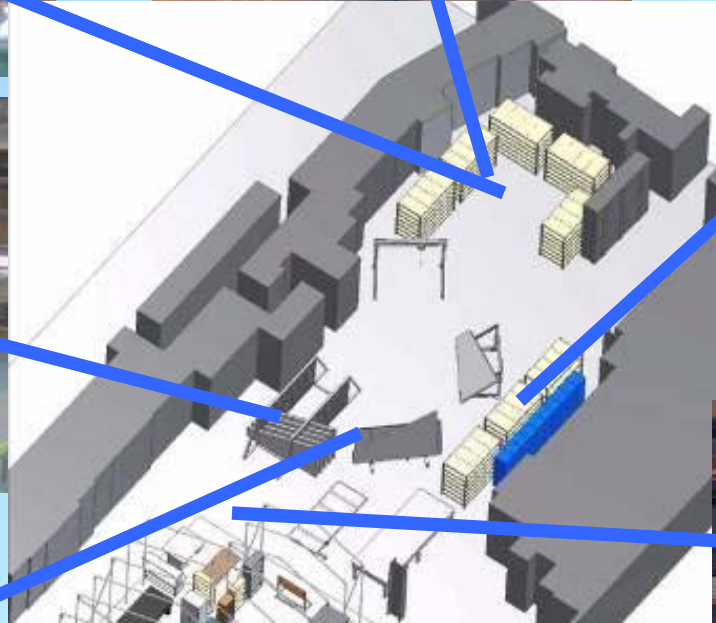
- Gap and Module assembly and testing (continues through shutdown) in-progress
- Gap and Module Storage with humidity control (need to get permanent elec., 2<sup>nd</sup> humidity controller & covers for last 3 storage racks) Nearly complete
- Tilting transport Table Nearly complete
- Burn in test stand (Bike rack section) In Progress
- Burn-in test stand gas system and controls (ready for 1<sup>st</sup> half octant) 5/29
- Assembly of half-octants for station 3 north 6/1-9/1



# RPC Factory

PH ENIV

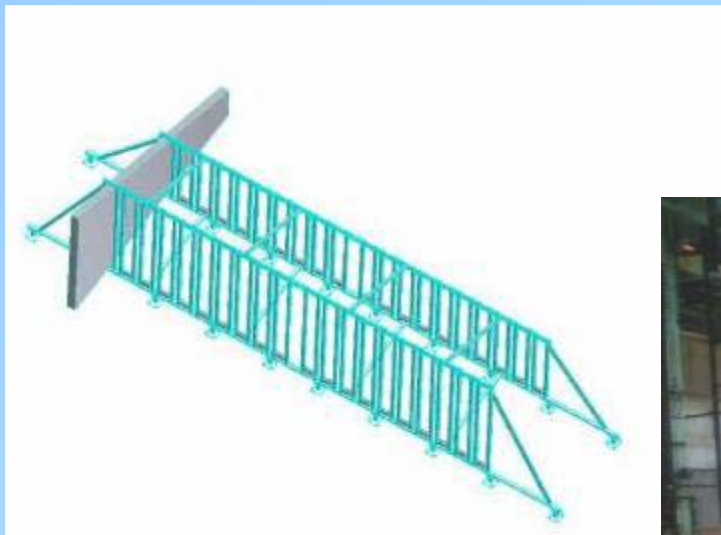
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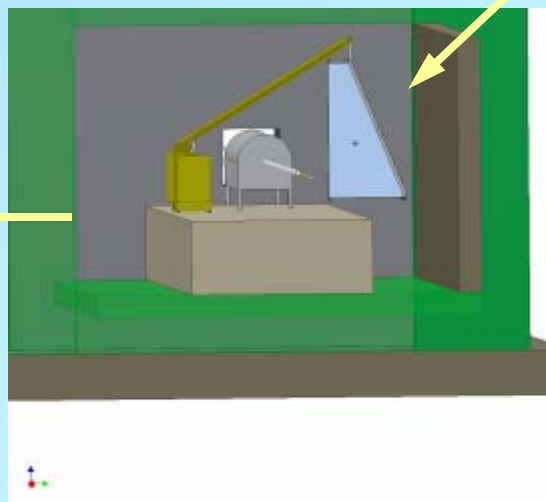
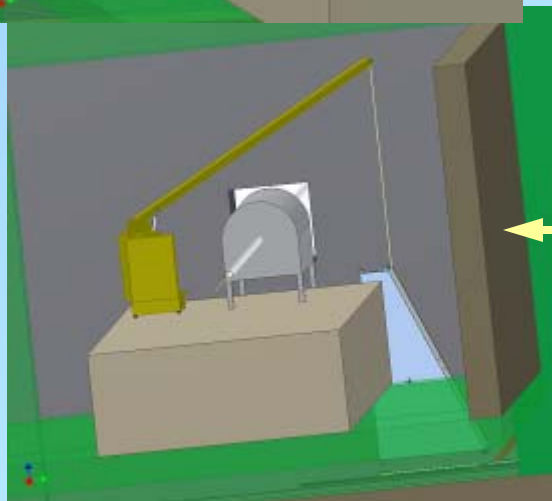
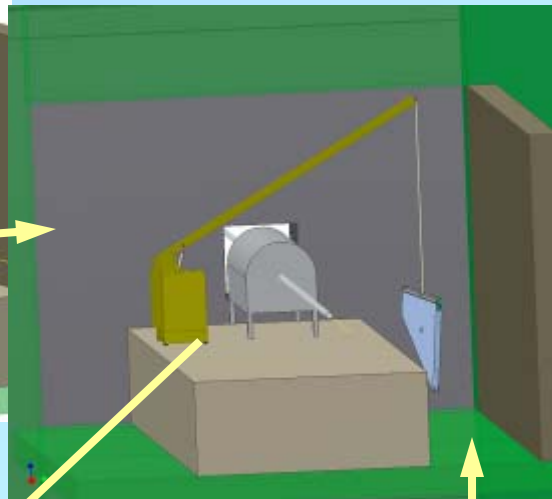
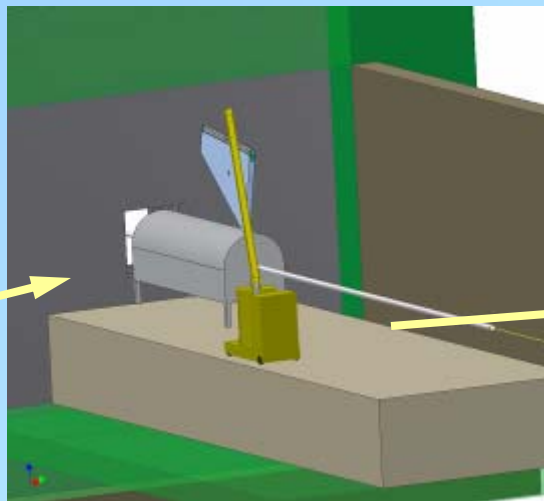
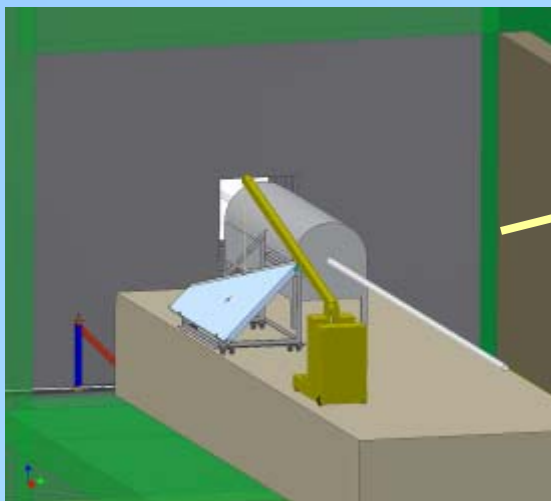
# RPC Factory Burn In Test Station For Octant and Half Octant Burn-in Tests

## Assembly in Progress



## RPC3 North Design Priority

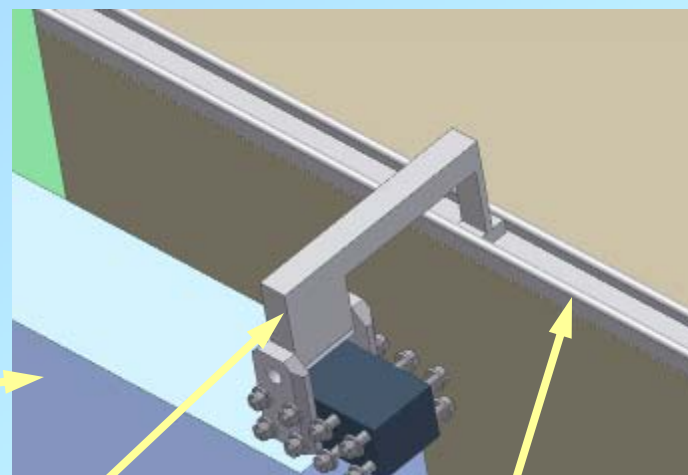
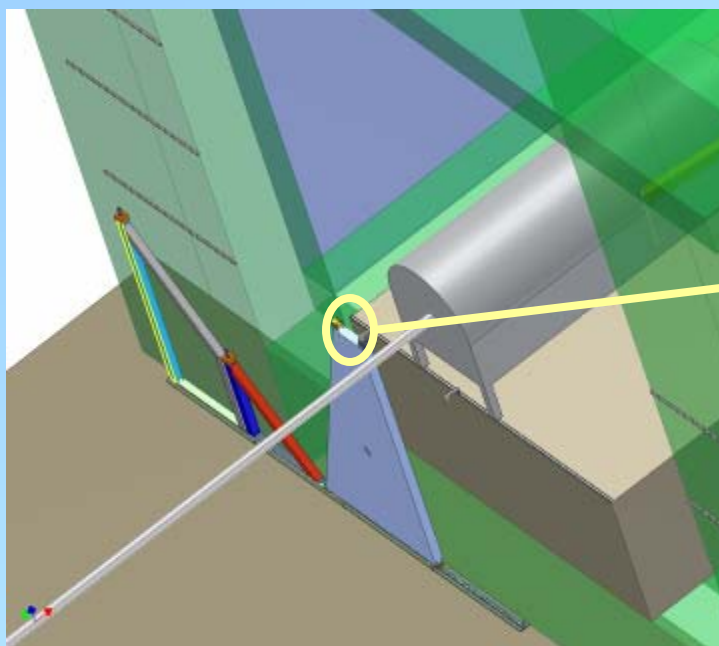
1. Base Translating Support - Design done, drawings at CS
2. Interconnecting blocks - Design done, drawings at CS
3. MuID steel drilled hole pattern
4. Upper support brackets (4)  
with E/W & U/D adjustment
5. Central translating clamp  
East and West X-Y translating  
clamps & tie-rods
6. Base Locking/Installation Fixture
7. Lifting Fixture Drawings
8. Survey Fixture
9. Installation drawing for 7 unistrut
10. guide rails & 2 vertical guide rails
11. Vertical Base Stackup Illustration
12. Adjustable cradle



A (TBD) cradle will be positioned in the west trench where the HO can be parked and the pick point shifted from horizontal to vertical



After HO1 west is installed, the clamp shown is used to keep the HO stable in the vertical configuration. Clamp is idealized actual clamp will have adjustments to align the pitch angle.

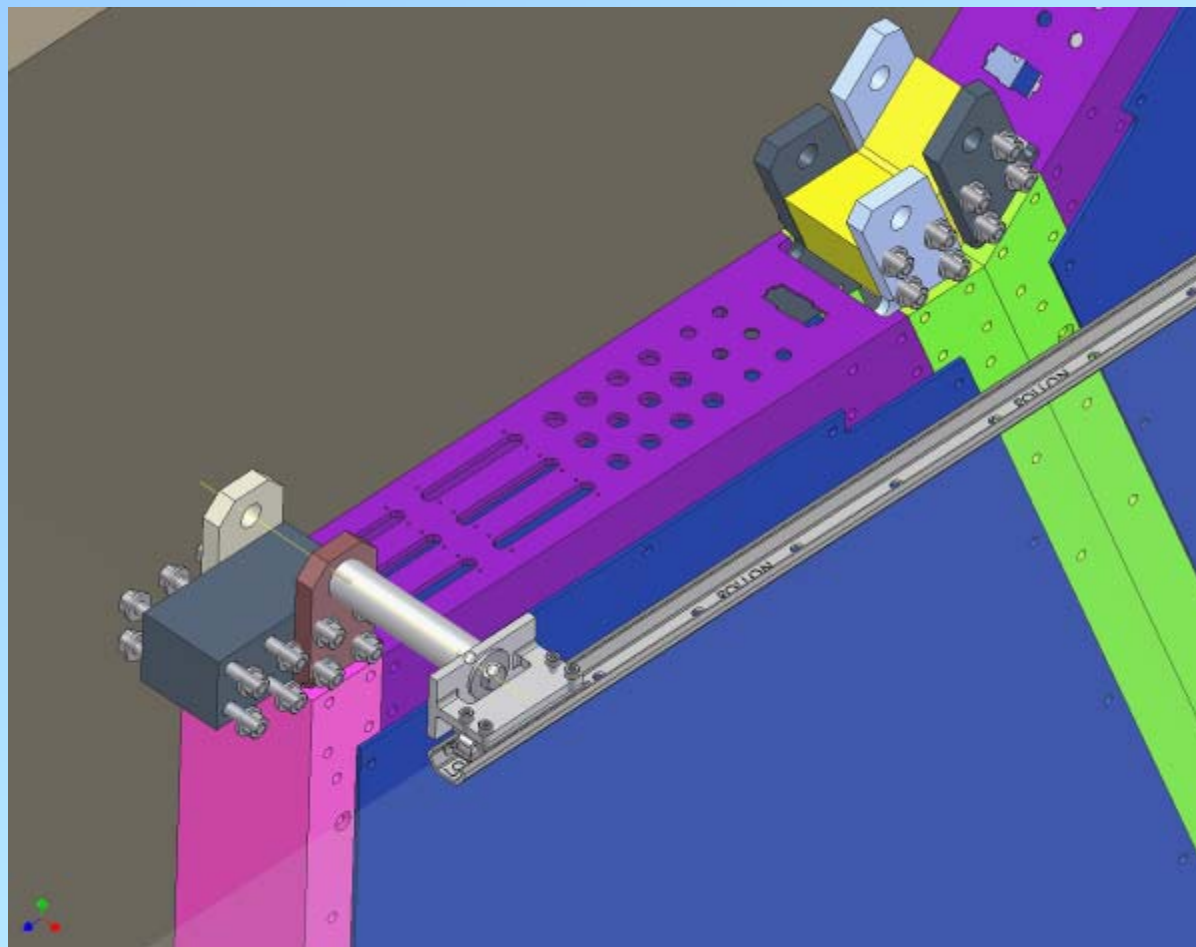


Unistrut low profile rail

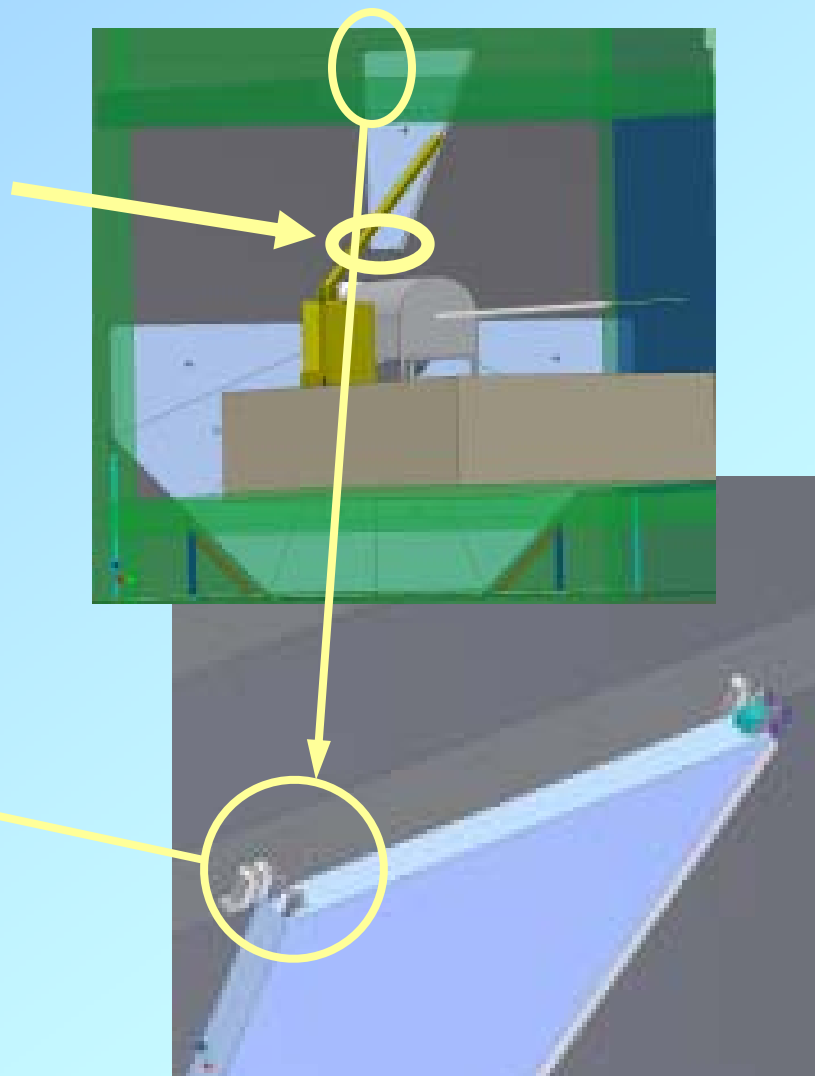
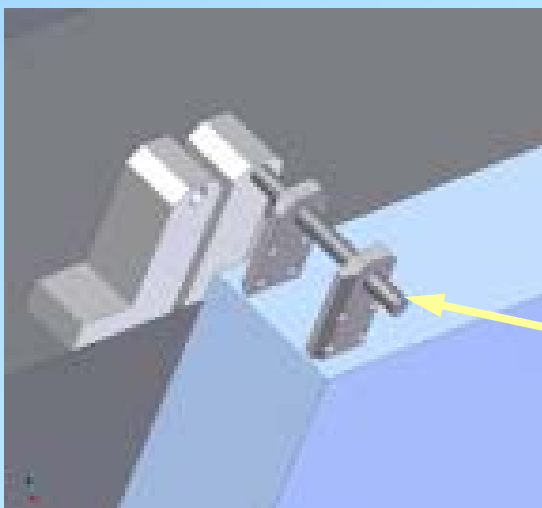
Clamp

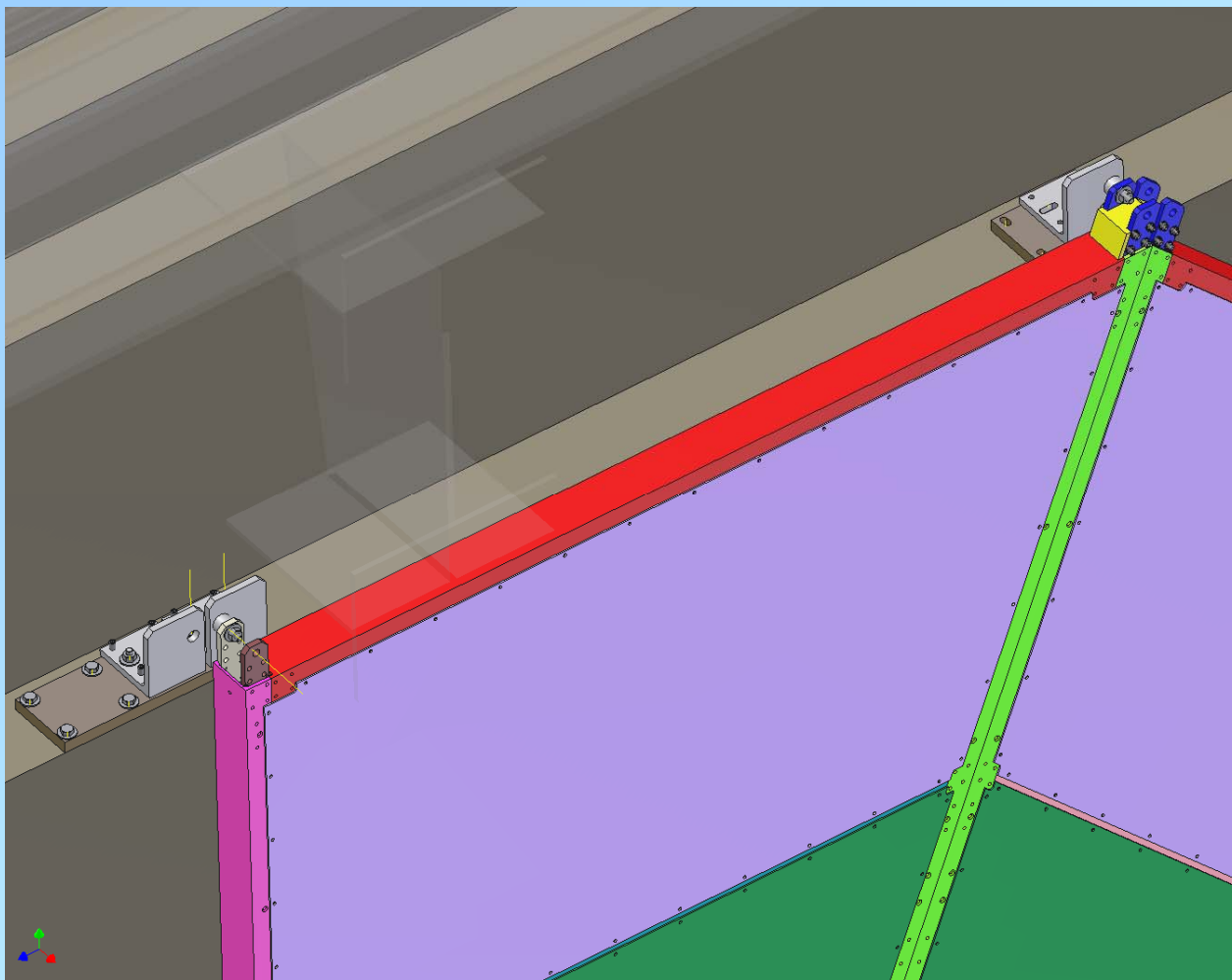
*Note: These views look thru MuID Steel which has been made transparent for this representation*





Taped Holes on  
MuID Steel at inner  
brackets





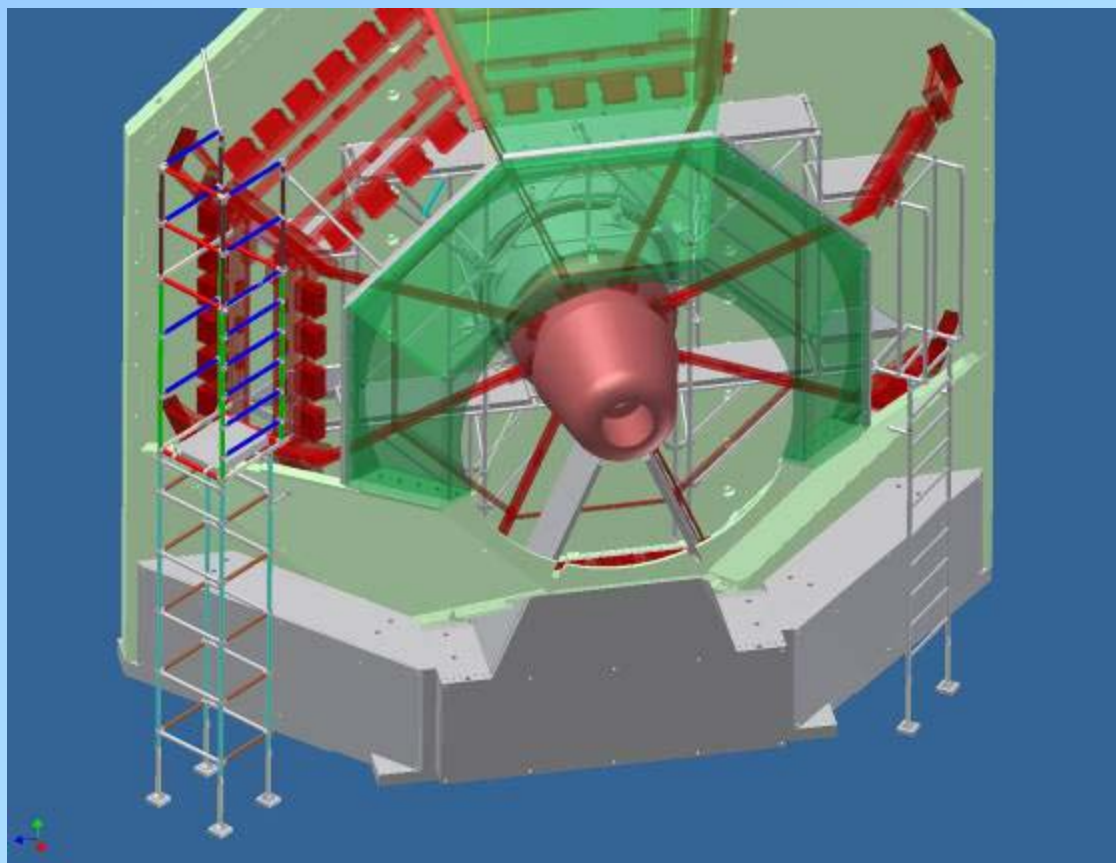
# RPC3 North Installation Schedule

Task	Completion Date
Installation Concept Finalized	Apr. 24
Half-Octant Brackets, Connecting Blocks, under detector translating support design	Apr. 30
Installation Fixturing and Tooling Design	May 15
Redesign crystal palace/IR Gas Barrier	May 29
End of Run 9	June 28
Fixturing/Tooling, Brackets/Block/support Fabrication	June 30
Move Shielding/Remove Crystal Palace	June 29-July31
Move cable trays and piping in gap 5	June 29-July 31
Simulated (practice) installation with new fixturing/ tooling	July 13-July 31
Install, level & survey support structure	Aug. 3 - Aug 14
Half Octant Testing and Assembly Complete (1 <sup>st</sup> half Octant ready by Aug.17, 16 <sup>th</sup> by Sep.18)	Aug. 17- Sep. 18
Mechanical Install Align & survey RPC3 N	Aug 17 - Sep. 30
Install 3 elect. Racks, all cables & gas system	Oct. 1 - Oct. 30
Commissioning	Nov. 1 - Nov. 30
Install new crystal palace/IR Gas Barrier & Shielding	Nov. 1 - Nov. 30
Start Run 10	Dec. 1

Task	Completion Date
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- |   |      |
|---|------|
| • Install Station 1 South Scaffold (carpenters) | 7/31 |
| • Install Station 1 cable management            | 8/14 |
| • Install station 2/3 scaffolding (Techs)       | 8/14 |
| • Install station 1 FEE's & Electronics         | 8/28 |
| • Install station 2 & 3 cable mngment           | 8/28 |
| • Station 1 plumbing                            | 9/11 |
| • Install station 2/3 FEE's & electronics       | 9/25 |
| • Station 2/3 plumbing                          | 10/9 |



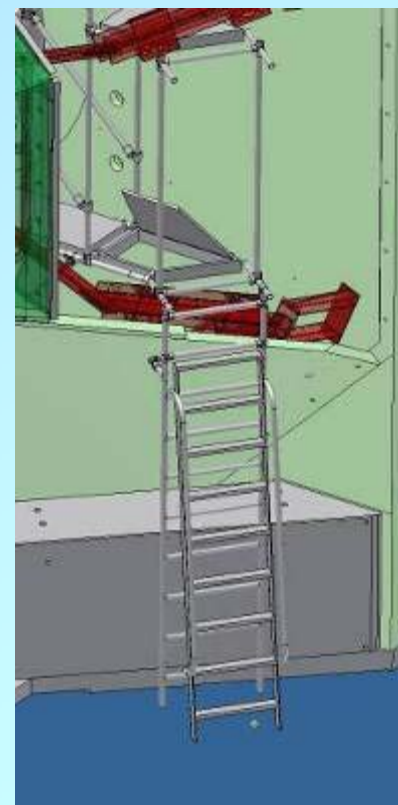


Concept approved at  
C-A Design Review

Met with Donna Dowling to discuss  
Bargaining Unit negotiations

## MMS scaffolding

Designed for MuTr installation. Approved in 2000 for use. Stress analysis done for worst case. Current design has minor modifications.



# MuTr Decapacitations

Task	Completion Date
Station 2/3 Decaps	8/14-8/28
Testing/verification	9/4

## PC1 East Repair

## Task

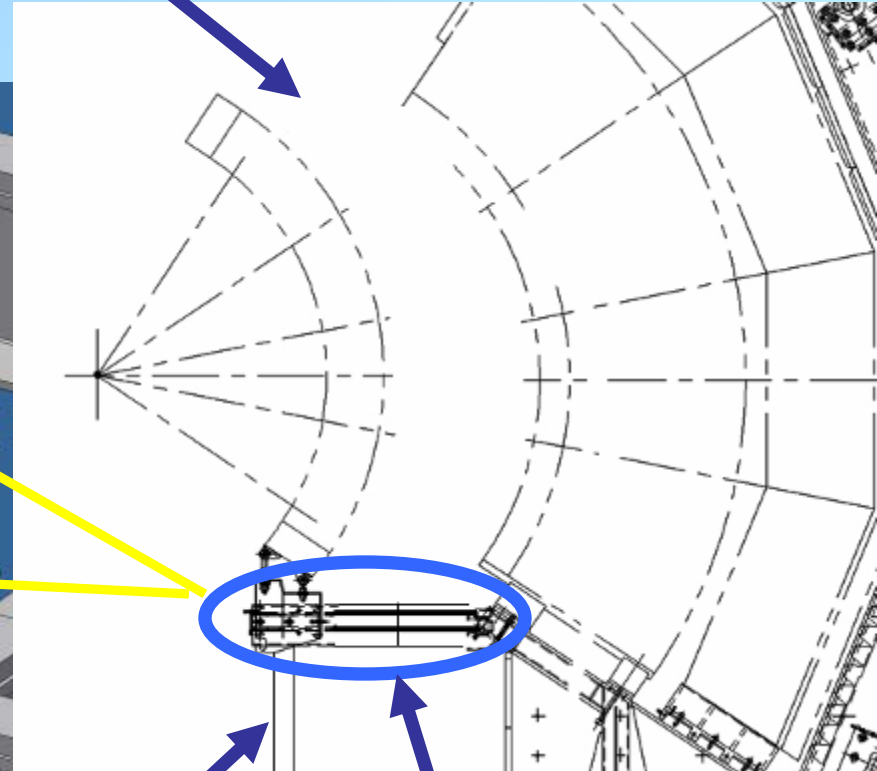
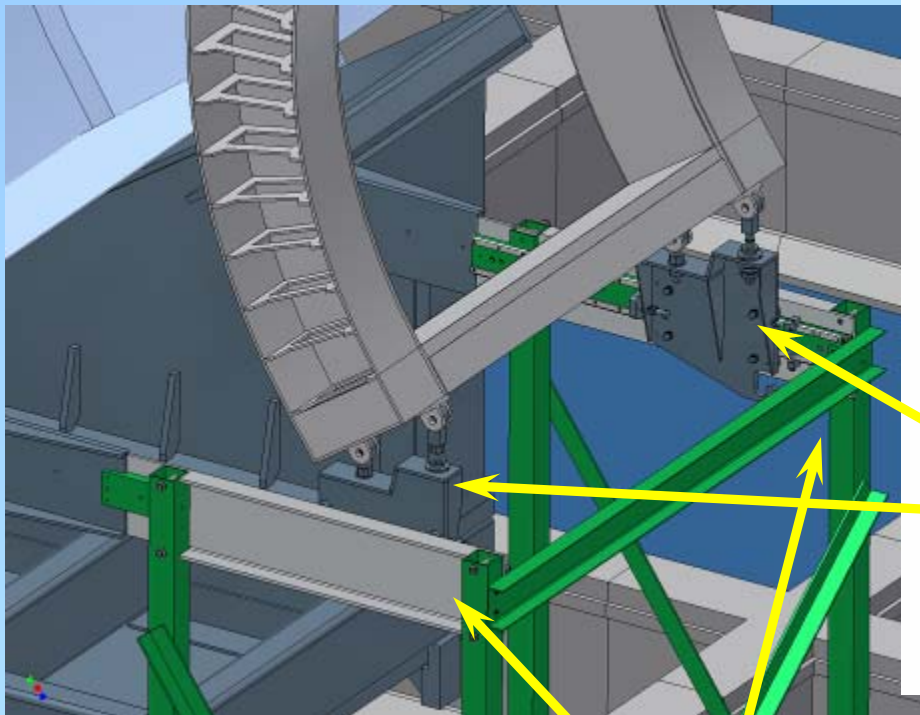
## Completion Date

- Design Repair support fixture Done
- Review and approval Done
- Fabrication 7/1 (order placed)
- Prep for Summer Sunday 8/7
- Restore order after summer Sunday 8/12
- Install support fixture 8/14
- Remove cables and plumbing 8/28
- Roll out DC/PC1 9/4
- Replace failed PC1 9/11
- Roll DC/PC1 in 9/18
- Restore cables and plumbing 9/25
- Test/commissioning 10/2

# PC1 East Repair Fixturing Design

Repairs to be performed during '09 Shutdown

Access to PC1 is adequate to remove and replace module



*Quote Rec'd from CS*

New Column Supports Under railway extensions

New Railway extensions will allow DC to be pulled out ~ 3 feet more

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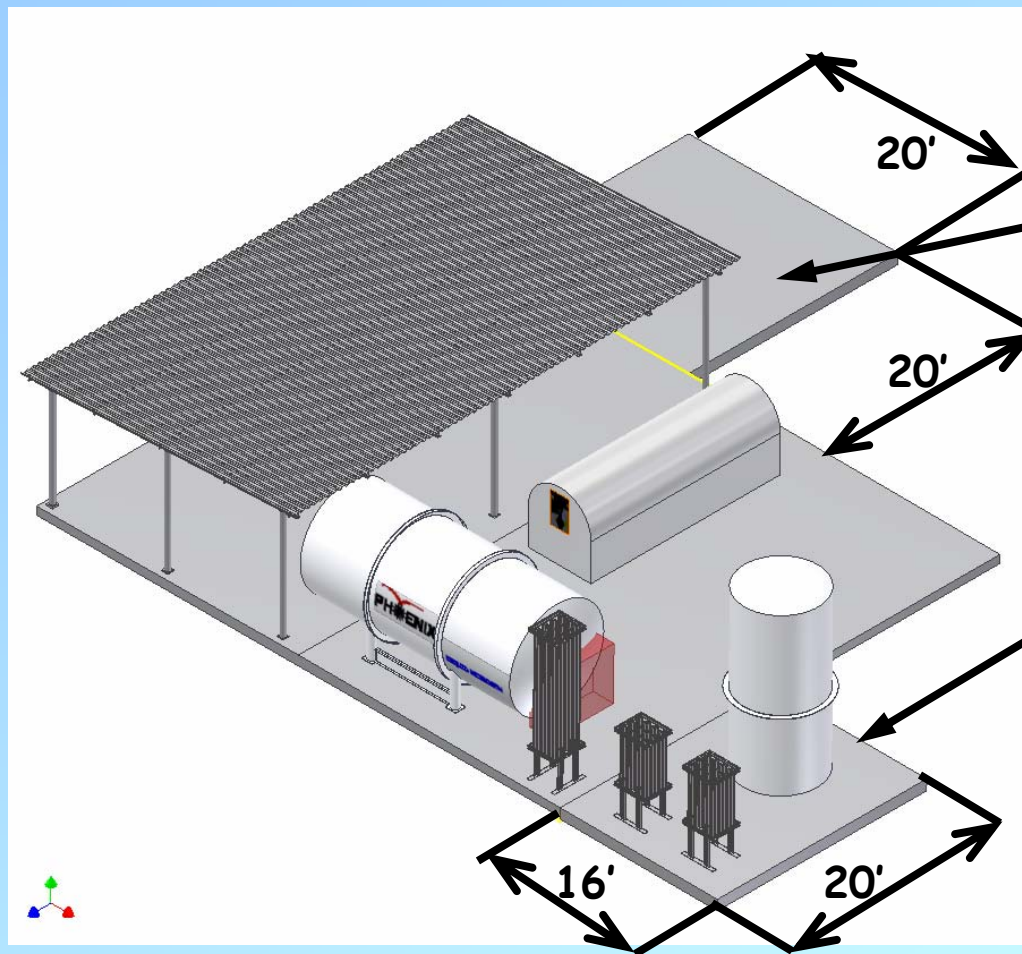
Task	Completion Date
• Proposal	Done
• Review and Approval	5/1
• Design	6/1
• Site Preparation	7/1
• Install Empties racks	8/1
• Install Ar Dewar	9/1
• Test and Commission	10/1

(Rough guess actual schedule TBD)



# New Argon Dewar

TECHNICAL SUPPORT NOOS



New storage pad for empty gas cylinders, 20'x 20', 9" min thick. reinforced concrete

New Argon Dewar Pad, 16' x 20', 12" minimum thickness, reinforced concrete.

Met with Dave Phillips to walk thru the plan

# New DCM Rack Plumbing

(Not Scheduled Yet)



4 new DCM racks need cooling water plumbing

## Other Work

### Upgrades Support:

New Beampipe sections (non-Be)  
(Sent Drawings to Mike Mapes)

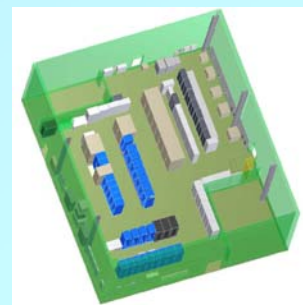
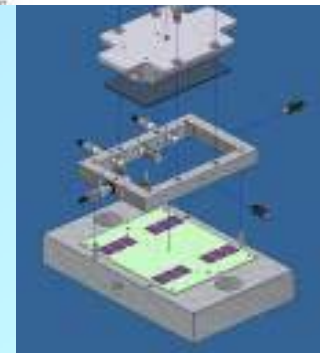
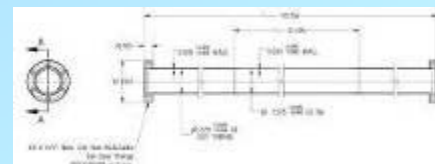
New Beampipe supports

FOCAL prototype design support

VTX fabrication tooling design

VTX installation design

FVTX design/eng'g support



Summer Sunday Pre/Post setup/tear down  
TBD Existing Detector Maint & Repairs  
Maintenance & Overhead Tasks  
Rack Room Reorganization

C-A-D AC, Water System, Electrical system work which may  
impact shutdown schedule: *Tasks, schedules, priorities TBD*

## End Of Run Party

- What to eat
- What to Drink
- What to Wear
- What to Do
- What to give

- Roof leaks in utility bathroom at northwest corner behind tech offices and over door between rack room and assembly hall.
- Heat wrap tape for trailer bathroom toilet drains to prevent freeze/clogging in winter.
- Improved Rack Room AC performance (This item has been addressed time and again but unsatisfactorily. Currently the AC fails periodically and is repaired only to fail again. On-condition maintenance is not adequate...an engineered solution is needed.)
- Icy conditions at mixing house north stairs

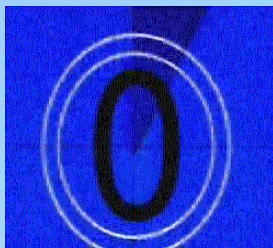


## Training Update:

Training update has been sent. Mostly in good shape. Check your records to see if there is any training you need renewed for the shutdown and try to get it done in the next 4 weeks.

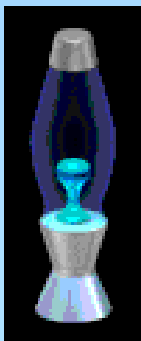


# Where To Find PHENIX Engineering Info



Shutdown 2009 starts one month from today!

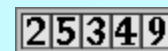
The countdown is on.



The calendar is filling up

Any requests for technical support need to be planned.

Take a number



Links for the weekly planning meeting slides, archives of past meeting slides, long term planning, pictures, videos and other technical info can be found on the PHENIX Engineering web site:

[http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL\\_SSint-page.htm](http://www.phenix.bnl.gov/WWW/INTEGRATION/ME&Integration/DRL_SSint-page.htm)

